

## Appendix C

### List of Symbols

$A$	Amplitude of a vibratory roller
$e$	Void ratio
$c$	Percent by weight of coarser fraction of the total material, expressed as a decimal, (1-f)
$C$	A dimensionless constant in calculating the centrifugal force of a vibratory roller = 35198
$CF_{1000}$	Vibratory roller centrifugal force operating at 1000 vpm
$CF_{1500}$	Vibratory roller centrifugal force operating at 1500 vpm
$f$	Percent by weight of finer fraction of the total material, expressed as a decimal, (1-c)
$k$	Coefficient of permeability
$g$	Acceleration due to gravity
$G_m$	Bulk specific gravity
$G_s$	Grain specific gravity or specific gravity of solids
$H$	Diamond core drill size, nominal 7.6 cm (3 in.)
$H_w$	Applied hydraulic head in the USBR constant-head permeability test
$h_0$	Initial depth of water in the open-pit permeability test
$h$	Depth of water in open-pit permeability test at time $t = \Delta t$
$h_1$	Height of water above tip of the standpipe at time $t = t_1$ in the Schmid falling-head test
$h_2$	Height of water above the tip of the standpipe at time $t = t_2$ in the Schmid falling-head test
$n$	porosity
$n_r$	porosity of the rock particle
$N$	Diamond core drill size, nominal 5.1 cm (2 in.)
$Q$	A rock classification system for engineering purposes
$Q_d$	Flow rate in a constant-head permeability test
$RMR$	A rock classification system for engineering purposes
$RQD$	Rock Quality Determinator

$r_0$	Inside radius of the standpipe in the standpipe permeability test
$S$	Degree of saturation
$S_i$	Initial degree of saturation of the compacted fill
$S_w$	Wetted degree of saturation of the compacted fill during the permeability test
$vpm$	Vibrations per minute
$w$	Water content
$W_u$	The unsprung weight of a vibratory roller drum module
$\Delta h$	Change in head over the time interval $\Delta t$ in the falling-head permeability test
$\Delta S$	Change in degree of saturation from the as-compacted condition to a wetted condition
$\Delta t$	Elapsed time in the falling-head permeability test
$\gamma_d$	Dry density
$\gamma_f$	Dry density of the finer fraction
$\gamma_m$	Bulk density
$\gamma_t$	Dry density of the total material
$\gamma_w$	Unit weight of water
$\lambda$	Mean number of discontinuities per meter in a rock mass
$\pi$	The constant Pi = 3.1416